July 1991

CURRICULUM VITAE

VARDA ROTTER
Department of Cell Biology
The Weizmann Institute of Science
Rehovot, Israel

PERSONAL:

Born 13 June, 1947, in Arisbach, Germany
Immigrated in 1948. Citizenship: Israeli.
Married, two daughters

DEGREES:

B.Sc. (cum laude), 1969, in Microbiology and Biochemistry, Bar-Ilan University, Ramat-Gan, Israel

M.Sc. (cum laude), 1971, in Cell Biology Department of Life Science, Bar-Ilan University, Ramat-Gan, Israel. *Thesis:* "Studies on quantitative responses of colonies of macrophages in agar to immunization with particulate and soluble antigens"

Ph.D., 1976, Department of Cell Biology, The Weizmann Institute of Science, Rehovot, Israel. *Thesis:* "Investigations of mechanisms involved in the immune reactivity of lymphoid cells. (a) Characterization of the target cells for thymus hormone activity; (b) Role of suppressor T cells in the regulation of immune responses

POSITIONS:

1985-to date	Associate Professor, Department of Cell Biology, The Weizmann Institute of Science, Rehovot, Israel
1989-1990	Visiting Professor on sabbatical leave, c/o Prof. Arnold Levine, Department of Biology, Lewis Thomas Laboratory, Princeton University, Princeton, New Jersey USA
1981-1985	Senior Scientist, Department of Cell Biology, Weizmann Institute of Science,Rehovot, Israel. *Research Topic:* Molecular mechanisms controlling the expression of the p53 tumor antigen
1979 - 1981	Postdoctoral fellow,Center for Cancer Research, Massachusetts Institute of Technology, Cambridge, MA, USA. Supervisor: Prof. David Baltimore. Supported by a U.S. Public Health Service International Research Fellowship. *Research Topic:* Analysis of cellular and viral-encoded transformation related proteins expressed in Ab-MuLV transformed cells

1976-1979 Scientist, postdoctoral fellow, Department of Cell Biology, The Weizmann Institute of Science. *Subject:* (a) The development of bioassays for the determination of THF activity along the process of purification and clinical evaluation of the immune response; (b) Purification of alanine from plasma or thymic extracts and its role in the immune response of human lymphocytes.

AWARDS:

1979 Public Health Service International Research post-doctoral Fellowship
1982 Israel Cancer Research Fund Fellowship
1982 Incumbent of the Norman and Helen Asher Chair for Cancer Research
1983 Special Fellow,Leukemia Society of America
1986 Incumbent of the Norman and Helen Asher Professorial Chair for Cancer Research
1986 M. Levinson Award for Molecular Biology, The Weizmann Institute
1987 Career Development Award from the Israel Cancer Research Fund
1989 UICC-Eleanor Roosevelt International Cancer Research Fellowship

PROFESSIONAL SOCIETY MEMBERSHIPS:

Israel Immunological Society

American Society for Microbiology

Chairman of the Israel Cancer Research Fund (ICRF) Alumni

EDITORIAL BOARDS:

Member, Editorial Board of Oncogene, 1986-date

INVITED LECTURES:

The First Israel Cancer Research Fund Scientific Conference, on Advanced Concepts in Cancer Research, March 6-10 1988, Tiberias Israel. Title of lecture: The involvement of the human p53 in malignancy and differentiation

Third International p53 Workshop, 8-10, May 1988, Villejuif, France. Title of lecture: The expression of two human p53 protein products is regulated by an alternative splicing mechanism

Symposium on "Virus-Cell Interaction." and Workshop on "Vectors for transfer and expression of genes," 18-20, October 1988, Wilsede Germany. Title of lecture: Analysis of transcriptional regulatory regions of the human p53 gene in human cells, using an EBV-derived shuttle vector

NATO/EEC course on "The molecular basis of cell growth regulation," 30 April-10 May 1989, Mallorca, Spain. Title of lecture: Rearrangements in the p53 gene in Philadelphia chromosome positive Chronic Myelogenous Leukemia

Fourth International p53 Workshop, 2-5, June 1990, Oxted England. Title of lectures: 1. Nuclear accumulation of the p53 protein is mediated by several localization signals. 2. Rearrangements in the p53 gene in Philadelphia chromosome positive Chronic Myelogenous Leukemia

Gordon Conference on Animal cells and viruses, 18-22 June 1990, Tilton School, NH, USA. Title of lecture: Nuclear accumulation of the p53 protein is mediated by several localization signals

26th Annual Meeting of the Israeli Society for Clinical Biochemistry, April 21-24, 1991, Tel Aviv. Title of lecture: p53, a growth regulation protein

13th Pasteur Institute-Weizmann Institute Symposium on "Use of gene transfer for the study of normal and malignant cell development," June 16-18, 1991, Rehovot, Israel. Title of Lecture: Nuclear localization and activity of wild type p53

Fifth International p53 Workshop, 21-24, June 1991, Princeton USA. Title of lecture: *Wild type* p53 expression mediates pre-B cell differentiation

15th International Congress of Biochemistry, August 4-8, Jerusalem Israel. Title of lecture: *Wild type* p53 expression mediates pre-B cell differentiation

Invited Scientist, The Joseph J. Schiffer Exchange Program in Oncology, Mt. Sinai Hospital, Toronto, Ontario, Canada, August 17-22, 1991. Titles of lectures: 1. p53 and human malignancies; 2. p53 , a growth regulator; 3. Nuclear localization and the activity of the p53 protein

Philippe Laudat Conference, INSERM, Oncogenes, Suppressor Genes and Cell Cycle Control, October 6-10 1991, Bischoffheim, France. Title of lecture: Nuclear Localization and activity of p53 suppressor gene.

Instituto de Investigacion Biologicas Clemente Estable, Montevideo, Uruguay, October 28-November 1, 1991, Course on Oncogenes. 1. Oncogenes in malig-nancy; 2. Suppressor genes and malignancy; 3. p53 expression in human tumors; 4. p53, a growth regulation gene
PEDECIBA, Program de las Nacions Unidas para el Desarrollo, UNESCO

The Second Israel Cancer Research Fund Scientific Conference on Advanced Concepts in Cancer Research, November 18-20, 1991, Ma'ale Hahamisha Israel. Title of lecture: p53, a growth regulator

Maimonides Conference, on Protein DNA and protein-protein interactions in oncogenesis, November 25-30, 1991, Ein Gedi, Israel. Title of Lecture: *Wild type* p53 expression mediates pre-B cell differentiation

ORGANIZATION OF SCIENTIFIC MEETINGS

Chairperson, Organizing Committee, The First Cancer Research Fund Scientific Conference on Advanced Concepts in Cancer Research, March 6-10 1988, Tiberias, Israel

Co-Organizer, with Prof. A. Levine: "Fifth p53 Workshop", June 1991, Princeton, USA.

Chairperson, Organizing Committee, The Second Cancer Research Fund Scientific Conference on Advanced Concepts in Cancer Research, March 6-10 1988, Ma'ale Hahamisha, Israel

Co-Organizer, with Prof. M. Oren: "Sixth p53 Workshop", November 1992, Weizmann Institute, Israel.

List of Students

Arie Katz, M. Sc. (graduated1984)
Ken Zerivitz, M. Sc. (graduated 1984)
Nicholas Harris, M. Sc. (1985), Ph. D. (1990)
David Wolf, Ph. D. (1985)
Michael Greenberg, M. Sc. (1987)
Gad Shaulsky, Ph. D. (1991)
Orit Shohat, M. Sc. (1987). Ph. D student
Einat Brill, M. Sc (1987). Ph. D. student
Ronit Aloni, Ph. D. student
Barry Elkind, Ph. D. student
Arnon Simons, Ph. D. student
Protima Bhattacharya Ms. C. student
Dov Shwarz Ms.C. Student

List of post doctoral fellows:

David Reisman 1986-1991
Dvora Ronen 1988-1990
Miron Prokocimer 1987-1988
Nir Navot

Varda Rotter

LIST OF PUBLICATIONS

1. Pluznik, D., Rotter, V. and Scheinman, R. (1972). Kinetics of proliferation of splenic macrophage precursor cells during the early primary immune response. J. RES. 11:154-

2. Pluznik, D.H. and Rotter, V. (1971). Differential response of macrophage precursors and antibody forming cells. In: The Reticuloendothelial system and Immune Phenomena. Plenum Press, N.Y., p. 249.

3. Lonai, P., Mogilner, B., Rotter, V. and Trainin, N. (1973). Studies on the effect of a thymic humoral factor on differentiation of thymus derived lymphocytes. Eur. J. Immunol.3:21-26.

4. Globerson, A., Rotter, V., Nakamura, I. and Trainin, N. (1973). Thymus extracts induce differentiation of thymus derived cells. In: Microenvironmental aspects of immunity. Eds. B.D. Jankovic and K. Isakovic. Plenum Press, N.Y., pp. 183-189.

5. Rotter, V., Globerson, A., Nakamura, I. and Trainin, N. (1973). Studies on characterization of lymphoid target cells for activity of thymus humoral factor. J. Exp. Med. 138:130-142

6. Trainin, N., Levo, Y. and Rotter, V. (1974). Resistance to hydrocortisone conferred upon thymocytes by a thymic humoral factor. Eur. J. Immunol. 4:643-637.

7. Rotter, V. and Trainin, N. (1974). Thymus cell population exerting a regulatory function in the immune response of mice to polyvinylpyrolidone. Cell. Immunol. 13:76-86.

8. Rotter, V. and Trainin, N. (1975). Increased mitogenic reactivity of normal spleen cells to T lectins induced by thymus humoral factor (THF). Cell. Immunol. 16:413-421.

9. Rotter, V. and Trainin, N. (1975). Inhibition of tumor growth in syngeneic chimeric mice-mediated by a depletion-of suppressor T cells. Transplantation 20:68-74.

10. Rotter, V. and Trainin, N. (1975). Elimination of suppressor T cells in mice undergoing a graft versus-host reaction expressed by increased response to polyvinylpyrrolidone. Cell. Immunol. 18:199-209.

11. Levo, Y., Rotter, V. and Ramot, B. (1975). Restoration of cellular immune response by levamisole in patients with Hodgkin's disease. Biomedicine 23:198-.

12. Rotter, V. and Trainin, N. (1975). The thymus and the immune response. (In Hebrew) Mada 19:76-80.

13. Trainin, N., Small, M., Zipori, D., Umiel, T., Kook, A.I. and Rotter, V. (1975). Characteristics of THF, a thymic hormone. In: Biological Properties of Thymic Hormones. (Ed. D.W. van Bekkum) Kooyker Scientific Publications, pp. 117-144.

14. Rotter, V. and Trainin, N. (1976). Depletion of suppressor T cells in syngeneic chimeric mice in immune reactivity of lymphocytes. In: Immune Reactivity of Lymphocytes. Eds. M. Feldman and A. Globerson. Plenum Press, pp. 593-598.

15. Rotter, V., Schlesinger, M., Kalderon, R. and Trainin, N. (1976). Response of human lymphocytes to PHA and Con A, dependent on and regulated by THF, a thymic hormone. J. Immunol. 117:1927-1932.

16. Rotter, V. and Trainin, N. (1977). Effect of THF on the response of different lymphoid cell populations to T mitogens. Isr. J. Med. Sci. 13:363-

17. Zaizov, R., Vogel, R., Cohen, I., Varsano, I., Shohat, B., Rotter, V. and Trainin, N. (1977). Thymic hormone (THF) therapy in immunosuppressed children with lymphoproliferative neoplasia and generalized varicella. Biomedicine 27:105-108.

18. Varsano, I., Shonfeld, T.M., Matoth, Y., Shohat, B., Englander, T., Rotter, V. and Trainin, N. (1977). Severe disseminated adenovirus infection successfully treated with a thymic humoral factor, THF. Acta Pediatr. Scand. 66:329-331.

19. Rotter, V., Fink, A. and Trainin, N. (1978). In vitro allogeneic response of human lymhocytes dependent on dialyzable plasma components and a thymic hormone, THF. Cell. Immunol. 36:242-250.

20. Rotter, V. and Trainin, N. (1979). Augmented response of human cells to PHA and Con A mediated by thymic hormone (THF) and by a thymic plasma restoring factor (TPRF). J. Immunol. 122:414-420.

21. Rotter, V., Yakir, Y. and Trainin, N. (1979). Role of L-alanine in the response of human lymphocytes to PHA and Con A. J. Immunol. 123:1726-1731.

22. Trainin, N., Zaizov, R., Yakir, Y. and Rotter, V. (1979). Thymic hormones: Characterization and perspectives. In: The Immune System: Functions and Therapy of Dysfunction. Eds. G. Doria and A. Eshkol. Acad. Press, London 27:159-169.

23. Trainin, N., Rotter, V., Yakir, Y., Leve, R., Handzel, Z. I., Shohat, B. and Zaizov, R. (1979). Biochemical and biological properties of THF in animal and human models. In: Subcellular Factors in Immunity. Ed. H. Friedman, Annals N.Y. Acad. Sci. 332, pp. 9-22.

24. Zaizov, R., Vogel, R., Wolach, B., Cohen, I.J., Varsano, I., Shohat, B., Handzel, Z.T., Rotter, V., Yakir, Y. and Trainin, N. (1979). The effect of THF in lympho-proliferative and myeloproliferative diseases in children. In: Subcellular Factors in Immunity. Ed. H. Friedman. Annals N.Y. Acad. Sci. 332:172-183.

25. Rager-Zissman, B., Harish, Z., Rotter, V., Yakir, Y. and Trainin, N. (1980). Treatment of mice infected with Sendai virus with THF, a thymic hormone. In: Advances in Allergology and Immunology. A. Oehbling et al., eds. Pergamon Press, Oxford and New York, pp. 25-31.

26. Rotter, V., Witte, O.N., Coffman, R. and Baltimore, D. (1980). Abelson-murine leukemia virus-induced tumors elicit antibodies against a host cell protein, p50. J. Virol. 36:547-555.

27. Rotter, V., Boss, M.A. and Baltimore, D. (1981). Increased concentration of an apparently identical cellular protein in cells transformed b either Abelson murine-leukemia virus of other transforming agents. J. Virol. 28:336-346.

28. Rotter, V. (1983). p53, a transformation-related cellular encoded protein, can be used as a biochemical marker for the detection of primary tumor cells. Proc. Natl. Acad. Sci. 80:2613-2617.

29. Rotter, V, Abutbul, H. and Wolf, D. (1983). The presence of p53 transformation related protein in Ab-MuLV transformed cells is required for their development into lethal tumors. Int. J. Cancer 31:315-320.

30. Rotter, V., Friedman, H., Katz, A., Zerivitz, K. and Wolf, D. (1983). Variations in antigenic determinants of p53 transformation-related protein obtained from various species. J. Immunol. 181:329-333.

31. Rotter, V., Abutbul, H. and Ben-Ze'ev, A. (1983). p53 transformation related protein accumulates in the nucleus of transformed fibroblasts in association with the chromatin and is found in the cytoplasm of non-transformed fibroblasts. EMBO J. 2:1041-1047.

32. Rotter, V., Wolf, D., Pravtcheva, D. and Ruddle, F.H. (1984). Chromosomal assignment of the murine gene encoding the transformation related p53. Mol. Cell. Biol. 4:383-385.

33. Wolf, D., Admon, S., Oren, M. and Rotter, V. (1984). Ab-MuLV transformed cells lacking the p53 protein synthesis, express aberrant p53 mRNA species. Mol. Cell. Biol. 4:552-558.

34. Rotter, V., Wolf, D. and Nicolson, G.L. (1984). The expression of transformation-related protein p53 and p53-containing mRNA in murine RAW-117 large cell lymphoma cells of differing metastatic potential. Clin. Exp. Metast. 2:199-204.

35. Wolf, D. and Rotter V. (1984). Inactivation of p53 gene expression by an insertion of Moloney Murine Leukemia viral-like DNA sequences. Mol. Cell. Biol. 4:1402-1410.

36. Parada, L., Land, H., Weinberg, R., Wolf D. and Rotter, V. (1984). Cooperation between gene encoding p53 tumour antigen and ras in cellular transformation. Nature 312:649-651.

37. Wolf, D., Harris, N. and Rotter, V. (1984). Reconstitution of p53 expression in a non-producer Ab-MuLV transformed cell line by transfection of a functional p53 gene. Cell 38:119-126.

38. Wolf, D. and Rotter, V. (1984). Modification of p53 gene expression by integration of a foreign DNA element. Cold Spring Harbor Conferences on Cell Proliferation and Cancer. The Cancer Cell 2, Oncogenes and Viral Genes, pp. 403-409.

39. Nicolson, G.L., Rotter, V., Wolf, D., Irimura, T., Reading, C.L., Blick, M., La

40. Wolf, D. and Rotter, V. (1985). Major deletions in the p53 gene cause the lack of p53 expression in HL-60 cells. Proc. Nat. Acad. Sci. US 82:790-794.

41. Wolf, D., Harris, N. Goldfinger, N. and Rotter, V. (1985). Isolation of a full length cDNA clone coding for an immunological distinct p53 molecule. Mol. Cell. Biol. 5:127-132.

42. Rotter, V., Wolf, D., Blick, M. and Nicolson, G.L. (1985). Expression of *abl* and other oncogenes is independent of metastatic potential in Abelson virus transformed malignant murine large cell lymphoma. Clin. Exp. Metast. 3:77-86.

43. Wolf, D., Laver-Rudich, Z. and Rotter, V. (1985). In vitro expression of human p53 cDNA clones and characterization of the cloned human p53 gene. Mol. Cell. Biol., 5:1887-1893.

44. Rotter, D. and Wolf, D. (1985). Biological and molecular analysis of p53 cellular encoded tumor antigen. Adv. Cancer Res. 43:113-141.

45. Prokocimer, M., Shaklai, M., Ben-Bassat, H., Wolf, D., Goldfinger, N. and Rotter, V. (1986). Expression of p53 in human leukemia and lymphoma. Blood 68:113-118.

46. Miller, C., Mohandas, T., Wolf, D., Prokocimer, M., Rotter, V. and Koeffler, H.P. (1986). Human p53 gene localized to short arm of chromosome 17. Nature 319:783-784.

47. Arai, N., Nomura, D., Yokota, K., Wolf, D., Brill, E., Shohat, O. and Rotter, V. (1986). Immunologically distinct p53 molecules generated by alternative splicing. Mol. Cell. Biol. 6:3232-3239.

48. Harris, N., Brill, E., Shohat, O., Prokocimer, M., Wolf, D., Arai, N. and Rotter, V. (1986). The molecular basis for heterogeneity of the human p53 protein. Mol. Cell Biol. 6:4650-4656.

49. Shohat, O., Greenberg, M., Reisman, D., Oren, M. and Rotter, V. (1987). Inhibition of cell growth mediated by plasmids encoding p53 anti-sense. Oncogene 1:277-281.

50. Prokocimer, M., Harris, N., Brill, E. and Rotter, V. (1987). Expression of p53 in human leukemia and lymphoma. UCLA Symposia: Recent Advances in Leukemia and Lymphoma, pp. 143-164.

51. Reisman, D., Greenberg, M. and Rotter, V. (1988). Human p53 gene contains one promoter upstream of exon 1 and a second stronger promoter within intron 1. Proc. Natl. Acad. Sci. USA 85:5146-5150.

52. Pohl, J., Goldfinger, N., Radler-Pohl, A., Rotter, V. and Schirrmacher, V. (1988). p53 increases experimental metastatic capacity of murine carcinoma cells. Mol. Cell. Biol. 8:2078-2081.

53. Eliyahu, D., Goldfinger, N., Pinchasi-Kimhi, O., Shaulsky, G., Skumik, Y., Arai, N., Rotter, V. and Oren, M. (1988). Meth A fibrosarcoma cells express two transforming mutant p53 species. Oncogene 3:313-321.

54. Reisman, D and Rotter, V. (1989). Two promoters that map to 5'-sequences of the human p53 gene are differentially regulated during terminal differentiation of human leukamic cells. Oncogene 4:945-953.

55. Reisman, D., and Rotter, V. (1989). Induced expression from the Mo-MuLV LTR during differentiation of human myeloid cells is mediated through its transcriptional enhancer. Mol. Cell. Biol. 9:3571-3575.

56. Kelman, Z., Prokocimer, M, Peller, S, Kahan Y, Rechavi, G, Manor Y, Cohen A. and Rotter, V. (1989). Rearranegements in the p53 gene in Philadelphia chromosome positive chronic mylogenous leukemia. Blood 74:2318-2324

57. Reisman, D , and Rotter, V. (1989). Analysis of transcriptional regulatory regions of the human p53 gene in human cells using an EBV-derived shuttle vector in: Vectors for transfer and expression of genes. NATO ASI Series, Vol H 34 pp419-436 Vectors as Tools for Study of Normal and Abnormal Growth and differentiation. Ed. by H. Lother et al.

58. Kelman, Z., Prokocimer, M, Peller, S, Kahan Y, Rechavi, G, Manor Y, Cohen A. and Rotter, V. (1990). Rearrangments in the p53 gene in Philadelphia chromosome positive chronic mylogenous leukemia. Haematology Digest 4, 9-10.

59. Rotter, V. and Prokocimer, M. (1990). p53 and human malignancies. Adv. Cancer Res., 57:257-271.

60. Trakhtenbrot, L., Kelman, Z., Rotter, V., and Haran-Ghera. N. (1990). Chromosomal mapping of the Murine c-abl proto-Oncogene by in-situ hybridization. Leukemia 4:136-137.

61. Shaulsky, G., Ben-Ze'ev, A. and Rotter, V. (1990). Subcellular distribution of the p53 protein during the cell cycle of Balb/c 3T3 cells. Oncogene, 5: 1707-1711

62. Shaulsky, G., Goldfinger, N., Ben-Ze'ev, A. and Rotter, V. (1990). Nuclear accumulation of p53 protein is mediated by several nuclear localization signals and plays a role in tumorigenesis. Mol. Cell. Biol. 10: 6565-6577

63. Kern, S.E., Kinzler, K.W., Baker, S.J., Nigro, J.M., Rotter, V., Levine, A.J., Friedman, P., Prives, C. and Vogelstein, B. (1991). Mutant p53 proteins bind DNA abnormally in vitro. Oncogene 6: 131-136.

64. Ronen, D., Rotter V., and Reisman D. (1991). Expression from murine p53 promoter is mediated by factor-binding to a down stream Helix-Loop-Helix recognition motif. Proc. Nat. Acad of Sci. 88: 4128-4132.

65. Shaulsky, S., Goldfinger, N., Peled A., and Rotter, V. (1991). Involvment of *wild type* p53 in pre-B cell differentiation in vitro. Proc. Nat. Acad of Sci. 88: 8982-8986

66. Shaulsky, G., Goldfinger N., and Rotter V., (1991). Alteration in Tumor Development *in vivo* Mediated by Expression of *Wild type* or *Mutant* p53 Proteins. Cancer Research. 51: 5232-5237

67. Shohat-Foord O., P., Bhattacharya, and RotterV., (1991). A DNA binding domain in contained in the C-terminus of*wild type* p53 protein. Nucleic Acid Research 19:5191-5198.

68. Shaulsky, G., Goldfinger, N., Tosky, M.S., Levine, A.J. and Rotter, V. (1991). Nuclear localization of wild type and mutant p53 proteins is essential for their activities. Oncogene 11:1707-

69. Shaulsky, G., Goldfinger N., Peled and A., and Rotter V., Involvement of *Wild Type* p53 Protein in the Cell Cycle Requires Nuclear Localization. Cell Growth and Differentiation. in press.

70. Reisman, D., and Rotter, V., C-Myc Enhances Expression from the Promoter of the p53 Tumor Suppressor Gene Through site-Specific Binding to Downstream CACGTG motif. *Submitted for publication in Sciencel.*